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Supplemental Material to:

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The basic N-terminal domain of TRF2 limits recombination endonuclease action at human telomeres

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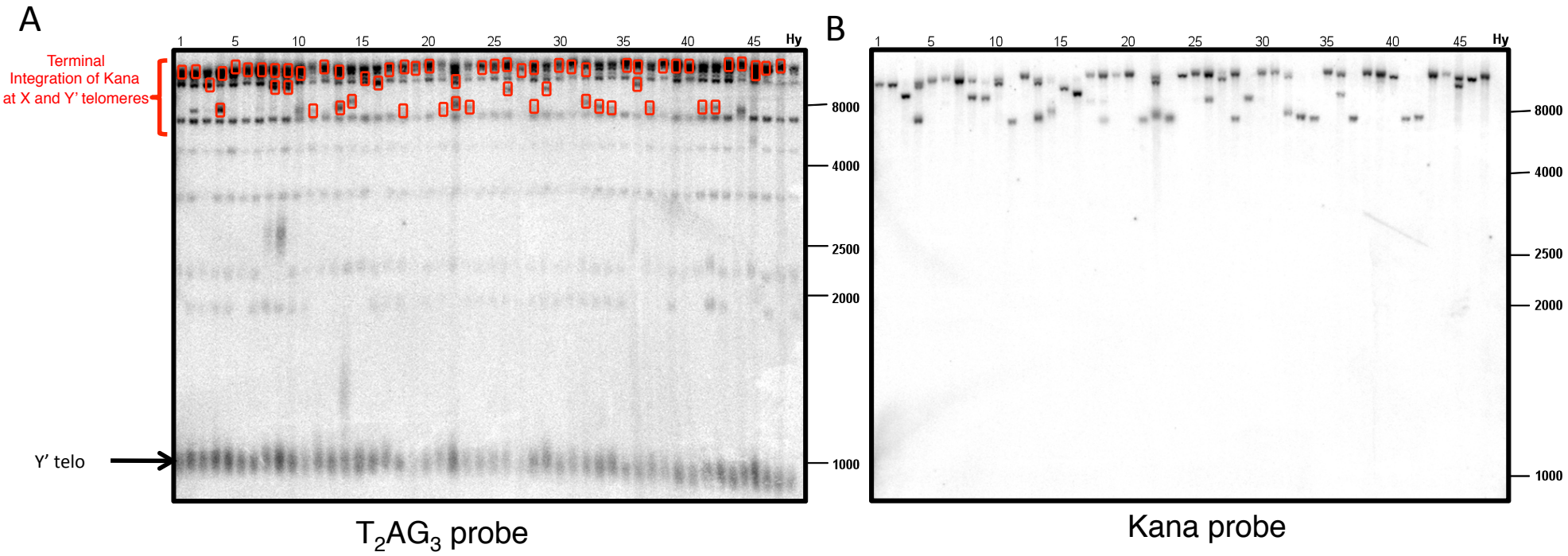

Figure S1. Integration events of the Kana plasmid at X and Y' telomeres. We checked 47 G418 resistant humanized yeast (*tlc1-h*) colonies by Southern Blot analysis by using T_2AG_3 (A) or Kana (B) probes. The genomic DNA was digested with *XhoI*, a restriction enzyme that did not cleave within the pLC14 plasmid, but had a conserved site within Y' elements. We observed an heterogeneous smear around 1 kb, which represented the terminal *XhoI* restriction fragments of chromosomes with Y' telomeres. In addition, several of the higher molecular weight T_2AG_3-hybridizing bands corresponded to telomeres bearing only a X sequence or internal restriction fragments containing T_2AG_3 repeats. In general, we noticed an increase in the intensity of the Y' telomere hybridization signal as well as an increase in the length of Y' telomeres with respect to *tlc1-h* cells, changes that were also observed in X telomeres. Some transformants were lacking the X telomere discrete bands, but showed an overelongation. The superimposition of the two signals (red boxes in panel A) revealed that the bands recognized by the Kana probe systematically overlapped with bands revealed by the telomeric probe. Similar results were obtained using Y' or X specific probes. These data suggest that the Kana-T_2AG_3 plasmid, as expected, was targeted into yeast telomere in *tlc1-h* cells. According to the size of the overlapping bands, we can estimated that the number of the integrated plasmid ranges between one and two.

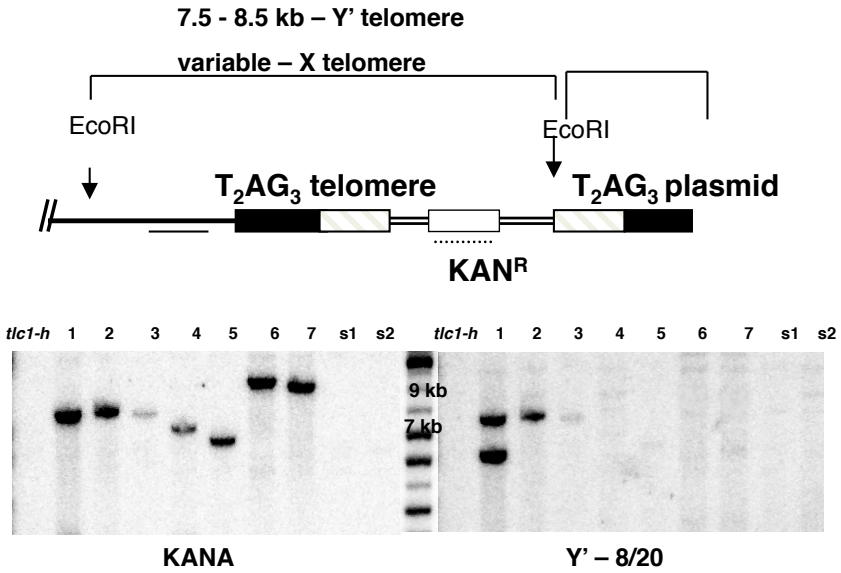

Figure S2. Example of Southern blot experiment checking the excision event in G418 sensitive clones. In this case, seven G418 resistant (1-7) and two sensitive (s1-s2) clones were analyzed. The genomic DNA was digested with *EcoRI*, a restriction enzyme that liberate a KANA-containing fragment. This fragment disappears in the genomic DNA of sensitive clones.